Title: System and Method for Defining Private Functions of a Multi-Function Peripheral Device

Assignee: Intel Corporation

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the subject application.

Listing of Claims:

- 1. (Currently Amended) A system comprising:
 - a peripheral device adapted to define a plurality of device functions accessible through a data interface with a data bus, wherein at least one of the plurality of device functions is an external device function;
 - a first processing system adapted to communicate with a first device function defined by the peripheral device through the data interface; and
 - a second processing system adapted to communicate with a second device function defined by the peripheral device through the data interface.
- 2. (Original) The system of claim 1, wherein the first processing system comprises logic to enumerate each device function associated with an I/O channel.
- 3. (Original) The system of claim 2, wherein the first device function comprises logic to communicate with a RAID channel.
- 4. (Original) The system of claim 1, wherein the second processing system is coupled to the data bus through a bridge and the first processing system is a peripheral device

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5. (Previously Presented) The system of claim 1, wherein the first processing system

comprises logic to cause the peripheral device to conceal one or more device functions from the

second processing system while enabling the second processing system to communicate with at

least one unconcealed device function defined by the peripheral device.

6. (Previously Presented) The system of claim 5, wherein the first processing system

comprises:

logic to enumerate a first device function defined by the peripheral device; and

logic to set information in a configuration header maintained at the peripheral

device to conceal the first device function from the second processing system while

enabling the first processing system to communicate with the first device function.

(Original) The system of claim 5, wherein the system further comprises a bridge coupled 7.

to the peripheral device through a secondary bus, and wherein the bridge comprises logic to

initiate execution of an enumeration process by the first processing system prior to completion of

an enumeration process by the second processing system.

(Original) The system of claim 5, wherein the first processing system comprises logic to 8.

transmit a signal to the peripheral device to inhibit enumeration of the peripheral device by the

second processing system.

9. (Currently Amended) A method comprising:

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initiating a first enumeration procedure at a first processing system to enumerate a

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first device function defined by a peripheral device coupled to a data interface of a data

bus; and

initiating a second enumeration procedure at a second processing system to

enumerate a second device function defined by the peripheral device;

wherein at least one of the first and second device functions is an external device

function.

10. (Original) The method of claim 9, the method further comprising enumerating at least

one device function associated with an I/O channel.

(Original) The method of claim 10, wherein the device function associated with the I/O 11.

channel comprises logic to communicate with a RAID channel.

12. (Original) The method of claim 9, wherein the second processing system is coupled to

the data bus through a bridge and the first processing system is a peripheral device

13. (Previously Presented) The method of claim 9, the method further comprising causing the

peripheral device to conceal one or more device functions from the second processing system

while enabling the second processing system to communicate with at least one unconcealed

device function defined by the peripheral device.

14. (Previously Presented) The method of claim 13, wherein the method further comprises:

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enumerating a first device function defined by the peripheral device; and

setting information in a configuration header maintained at the peripheral device

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to conceal the first device function from the second processing system while enabling the

first processing system to communicate with the first device function.

15. (Original) The method of claim 13, wherein the method further comprises initiating

execution of an enumeration process by the first processing system prior to completion of an

enumeration process by the second processing system.

16. (Original) The method of claim 13, wherein the method further comprises transmitting a

signal to the peripheral device to inhibit enumeration of the peripheral device by the second

processing system.

17. (Currently Amended) An article comprising:

storage medium comprising machine-readable instructions stored thereon for:

initiating a first enumeration procedure at a first processing system to enumerate a

first device function defined by a peripheral device coupled to a data interface of a data

bus, the peripheral device defining a plurality of device functions, wherein at least one of

the plurality of device functions is an external device function; and

initiating a bus transaction on the data bus to cause the first device function to be

concealed from subsequent enumeration procedures while enabling at least one other

device function defined by the peripheral device to be enumerated by a subsequent

enumeration procedure.

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18. (Original) The article of claim 17, wherein the storage medium further comprises

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machine-readable instructions stored thereon for enumerating the first device function as an I/O

channel.

19. (Original) The article of claim 18, wherein the device function associated with the I/O

channel comprises logic to communicate with a RAID channel.

20. (Original) The article of claim 17, wherein the storage medium further comprises

machine-readable instructions stored thereon for initiating a bus transaction to set information in

a configuration header maintained at the peripheral device to conceal the first device function

from subsequent enumeration procedures.

21. (Currently Amended) A processing system comprising:

logic to initiate a first enumeration procedure to enumerate a first device function

defined by a peripheral device coupled to a data interface of a data bus, the peripheral

device defining a plurality of device functions, wherein at least one of the plurality of

device functions is an external device function; and

logic to initiate a bus transaction on the data bus to cause the first device function

to be concealed from subsequent enumeration procedures while enabling the subsequent

enumeration procedures to access at least one other device function defined by the

peripheral device.

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22. (Original) The processing system of claim 21, the processing system further comprising

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logic to enumerate the first device function as an I/O channel.

23. (Original) The processing system of claim 22, wherein the device function associated

with the I/O channel comprises logic to communicate with a RAID channel.

24. (Previously Presented) The processing system of claim 21, wherein the processing

system further comprises logic to initiate a bus transaction to set information in a configuration

header maintained at the peripheral device to conceal the first device function from subsequent

enumeration procedures while enabling the processing system to communicate with the first

device function.

25. (Original) The processing system of claim 24, wherein the data bus comprises a PCI data

bus and the processing system further comprises logic to initiate a bus transaction to modify data

in a Header Type register of the configuration header.

26. (Currently Amended) A method comprising:

initiating a first enumeration procedure at a first processing system to enumerate a

first device function defined by a peripheral device coupled to a data interface of a data

bus, the peripheral device defining a plurality of device functions, wherein at least one of

the plurality of device functions is an external device function; and

initiating a bus transaction on the data bus to cause the first device function to be

concealed from subsequent enumeration procedures while enabling at least one other

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device function defined by the peripheral device to be enumerated by a subsequent

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enumeration procedure.

27. (Previously Presented) The method of claim 26, the method further comprising enumerating

the first device function as an I/O channel.

28. (Previously Presented) The method of claim 27, wherein the device function associated with

the I/O channel comprises logic to communicate with a RAID channel.

29. (Previously Presented) The method of claim 26, the method further comprising initiating a

bus transaction to set information in a configuration header maintained at the peripheral device to

conceal the first device function from subsequent enumeration procedures while enabling the

first processing system to communication with the first device function.